

Sub A1

What is claimed is:

1. A negotiation protocol with compromise that is guaranteed to terminate, comprising:
 - 5 an advertisement, wherein a product or service that is to be negotiated is listed by a first negotiating party, the advertisement comprising a set of attribute-value pairs, each attribute-value pair including an attribute and a negotiable list of values or range of values for the attribute, for the product or service listed in the advertisement;
 - 10 a look-up, wherein the product or service listed in the advertisement is located for a second negotiating party;
 - 15 an offer, wherein the second negotiating party offers to negotiate one or more attributes for the product or service listed in the advertisement; and,
 - 20 one or more counters, wherein the first negotiating party responds to the offer with a first counter and, if each attribute is not agreed to or a failed negotiation is not declared, the second negotiating party and the first negotiating party continue to exchange counters until each attribute is agreed to or the failed negotiation is declared.
- 20 2. The negotiation protocol of claim 1, wherein the look-up locates the product or service listed in the advertisement by comparing one or more attribute-values provided by the second negotiating party with the set of attribute-value pairs in the advertisement.
- 25 3. The negotiation protocol of claim 1, wherein the offer comprises a first proposed list of values or range of values that the second negotiating party is offering for a first attribute that is included in the set of attribute-value pairs.
- 30 4. The negotiation protocol of claim 3, wherein the first counter comprises a second proposed list of values or range of values that the first negotiating party is offering for the first attribute.

5. The negotiation protocol of claim 4, wherein the second proposed list of values or range of values consists of the same values as the first proposed list of values or range of values and the first counter further comprises a third proposed list of values or range of values that the first negotiating party is offering for a second attribute that is included in the set of attribute-value pairs.

6. The negotiation protocol of claim 5, wherein the first proposed list of values is a list in order from the second negotiating party's most preferred value to the second negotiating party's least preferred value.

7. The negotiation protocol of claim 4, wherein the first counter further comprises a single proposed value that the first negotiating party is offering for a third attribute that is included in the set of attribute-value pairs.

8. The negotiation protocol of claim 7, further comprising a second counter, in which the second negotiating party responds to the first counter, the second counter comprising the single proposed value from the first counter, whereby the inclusion of the single proposed value indicates that the third attribute is agreed to and is prohibited from being further negotiated.

9. The negotiation protocol of claim 1, wherein the attribute-value pairs comprise a distributive attribute that is negotiated with single proposed values.

10. The negotiation protocol of claim 1, wherein the offer and the one or more counters introduce a value or values for each attribute in the set of attribute-value pairs, the negotiation protocol further comprising an ultimatum that includes a single value for each attribute and in response to which the agreement is reached or the failed negotiation is declared.

11. The negotiation protocol of claim 1, wherein one or more attributes from the set of attribute-value pairs are introduced and each counter includes a value or values for each attribute that was previously introduced except for previously agreed to attributes.

5 12. The negotiation protocol of claim 1, wherein one or more attributes from the set of attribute-value pairs are introduced with a corresponding list of values or range of values and each counter reduces the list of values or the range of values for at least one attribute that was previously introduced, narrows a gap between values for a previously introduced attribute or introduces a new attribute from the set of attribute-value pairs.

10 13. The negotiation protocol of claim 1, wherein a single value for a first attribute from the set of attribute-value pairs is agreed to in a counter and the first attribute is prohibited from being introduced into any subsequent counter.

15 14. The negotiation protocol of claim 1, further comprising an agreement, that is entered into when each attribute is agreed to, whereby the first negotiating party and the second negotiating party finalize the delivery of the product or service.

20 15. The negotiation protocol of claim 1, wherein the first counter includes a declaration of a failed negotiation due to a violation of the negotiation protocol, whereby the failed negotiation is declared.

25 16. The negotiation protocol of claim 1, wherein one of the counters introduces two or more disjunctions, each disjunction specifying different values for at least one attribute from the attribute-value pairs.

17. A method for negotiating with compromise that is guaranteed to terminate, comprising the steps of:

advertising a product or service that is offered for negotiation by a first negotiating party, wherein the advertising step comprises:

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listing a set of attribute-value pairs, each attribute-value pair

including an attribute and a negotiable list of values or range of values for the attribute, for the product or service;

looking-up the product or service from the advertising step, wherein the looking-up step comprises:

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comparing one or more attribute-values provided by a second

negotiating party with the set of attribute-value pairs in the advertisement to find a match;

offering to negotiate one or more attributes from the attribute-value pairs for the product or service, wherein the offering step comprises:

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proposing the second negotiating party's list of values or range of values for a first attribute from the set of attribute-value pairs;

countering the offering step with the first negotiating party's proposal of a list of values or range of values for the first attribute of the product or service;

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determining whether each attribute from the attribute-value pairs is agreed to or if a failed negotiation is declared; and

conducting one or more additional countering steps until each attribute from the attribute-value pairs is agreed to or if the failed negotiation is declared, wherein the second negotiating party and the first negotiating party alternate conducting the countering steps until each attribute from the attribute-value pairs is agreed to or the failed negotiation is declared.

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18. The method of claim 17, wherein each countering step reduces a list of values or range of values for a previously introduced attribute, narrows a gap between values for a previously introduced attribute or introduces a new attribute from set of attribute-value

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pairs unless each attribute from the attribute-value pairs is agreed to or the failed negotiation is declared.

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19. The method of claim 17, wherein one of the countering steps lists a single value for each previously introduced attribute from the set of attribute-value pairs.

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20. A negotiation conducted according to a negotiation protocol with compromise that is guaranteed to terminate, comprising:

an advertisement, wherein a product or service that is to be negotiated is listed by a first negotiating party, the advertisement comprising:

a set of attribute-value pairs, each attribute-value pair including an attribute and a negotiable list of values or range of values for the attribute, for the product or service listed in the advertisement;

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a look-up, wherein the product or service listed in the advertisement is located for a second negotiating party by comparing one or more attribute-values provided by the second negotiating party with the set of attribute-value pairs in the advertisement;

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an offer, comprising a first proposed list of values or range of values that the second negotiating party is offering for a first attribute that is included in the set of attribute-value pairs;

a first counter, comprising a second proposed list of values or range of values that the first negotiating party is offering for the first attribute;

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one or more additional counters, that are exchanged by the second negotiating party and the first negotiating party in alternating turns until each attribute is agreed to or a failed negotiation is declared, wherein each counter must reduce a list of values or range of values for a previously introduced attribute, narrow a gap between values for a previously introduced attribute or introduces a new attribute from set of attribute-value pairs unless each attribute from the attribute-value pairs is agreed to or the failed negotiation is declared.